"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A. A. PA 193T88

USSR/Metals - Cutting Oct 51

"Temperature During Cutting of Steel," A. A. Avakov, Chair of Phys, Tbilisi Inst of Railroad Engineers imeni Lenin

"Zhur Tekh Fiz" Vol XXI, No 10, pp 1262-1268

Author attempts to estimate temp by calibration of the cuttings that stick "naturally" to the cutter, obtained by retarding the tools. Results of measurement are plotted on curves although author considers his values somewhat low. Submitted 2 Apr 51.

193T88

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A. A.

DANILYAN, A.M., doktor tekhnicheskikh nauk, professor; AVAKOV, A.A., dotsent, kandidat tekhnicheskikh nauk, retsenzent; TISHIN, S.D., dotsent, kandidat tekhnicheskikh nauk, redaktor; SOKOLOVA, T.F., tekhnicheskiy redaktor.

[The heat and wear of metalcutting tools in action] Teplota i iznos instrumentov v protsesse rezaniia metallov. Moskva, Gos. Nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954. 275 p.
(Cutting tools) (MLRA 7:8)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A. A.

USSR,Metals - Temperature measurement of metal cutters FD-586

Card 1/1 Pub. 153-26/28

Author : Avakov, A. A.

Title : Local heating of cutters for the case of calibration of "natural" thermocouples

Periodical : Zhur. Tekh. fiz. 24, 941-942, May 1954

Abstract : A letter to the editor. Recommends his new procedure for calibrating and measuring the cutting temperatures of cutters, as opposed to the deficient method of "natural" thermocouples recently proposed.

Institution :

Submitted : September 18, 1953

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.A.

Multiple-edge cutter. Stan.i instr. 25 no.4:36 Ap '54. (MLRA 7:6)
(Cutting tools)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A. A.

USSR/Physics - Thermocouple FD - 3166

Card 1/2 Pub. 153 - 22/26

Author : Avakov, A. A.

Title : Calibration of two-cutter thermocouples

Periodical : Zhur. tekh. fiz., 25, No 13 (November), 1955, 2396

Abstract : Responses to the author's remark, published in this journal (25, No 5, 1954), testify to the favorable attitude of the authors of the letters toward the method recommended in his remark. The letters also comment that internal electrical heating permits realization of calibration only up to temperatures of the order of 700-800°C, but not higher; in other words, the question is posed concerning the applicability of the recommended method only for the calbration of natural thermocouples: cutter consisting of high-speed cutting steel and object, but not in the case of forced high-speed cutting by hard alloys where the cutting temperature is of the order of 1000°C and higher. To explain the misunderstanding arisen, the author of this note feels it necessary to remark that in promoting the mentioned method he has aimed, in the case of calibration of natural thermocouples consisting of cutter and item, modeling the actual chips coming off, without assigning special significance to the method itself of artificial heating; there is no objection to the expediency of this modeling and, consequently, against the idea itself of "dynamically hot" calibration. Therefore the question is posed thus: In case of the invariability of the author's recommended scheme is it impossible or

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

not to ensure heating of the hollow bar up to higher temperatures? Without touching in this note on the possibility of the application of a movable thermally insulated jacket, and also on widely known methods of main or supplemental heating (gas jet burner, high-frequency currents, etc.), the author remarks that the indicated object can be reached by way of a simultaneous use of internal and external heating, in correspondence with a scheme drawn in the article. Here the internal electrical heater, as earlier indicated by the author in articles in this journal, is connected with the rear mandrel, while the external electrical heater is connected to the support and shifted together. No references.

Submitted : March 31, 1955

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A. A.

USSR/ Engineering - Machining

Card 1/1 Pub. 128 - 12/35

Authors : Avakov, A. A., Cand. Tech. Sc., Docent

Title : Broad-edged cutters with negative face angle

Periodical : Vest. mash. 35/3, page 37, Mar 1955

Abstract : An account is given of the making of a broad-edged cutter with a negative face angle. Specifications as to material contour are stated with some information as to experience had with actual use of the tool. Five USSR references (1948-1951). Drawings.

Institution : .....

Submitted : .....

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

Avakov, A.A.

USSR/ Engineering - Cutting tools

Card 1/1 Pub. 128 - 13/33

Authors : Avakov, A. A.

Title : Large-size tapered cutter for very thick chips

Periodical : Vest. mash. 36/1, page 45, Jan 1956

Abstract : A new design of a large-size tapered cutter in which the bit is bolted to the shank, is briefly described and explained. Drawing.

Institution : .....

Submitted : .....

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.A., kand. tekhn. nauk, dots.

"High-speed power grinding of high-strength steels" by S.S. Mozhaev, T.G. Saromotina. Reviewed by A.A. Avakov. Vest. mash. 38 no.4:86-87 Ap '58. (MIRA 11:3)

(Grinding and polishing) (Steel)
(Mozhaev, S.S.) (Saromotina, T.G.)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

22(1)
30(7)

AUTHOR: Avakov, A.A., Candidate of Technical Sciences, Docent

TITLE: Intervuz Scientific Conference on Metal Cutting Problems

PERIODICAL: Vestnik vysshey shkoly, 1959, Nr 4, pp 85-86 (USSR)

ABSTRACT: The Intervuz Conference on the Present-Day Problems of Cutting Metals, which took place recently in the Gruzinskiy politekhnicheskiy institut (Georgian Polytechnical Institute), embraced a wide range of problems. It summed up the results of many years of research conducted by scientists in the field of cutting metals. The conference was attended by representatives of 36 cities of the USSR and delegates of countries of the People's democracies. The problems discussed at the conference are very important for modern machinebuilding and other branches of industrial production. Methods of high speed cutting of metals find application on an ever increasing scale, and the use of new alloys is expanding. The most important speeches delivered the plenary session were those of Professor Ye.P. Nadeinskaya of the Moskovskiy institut khimi-

Card 1/5

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

Intervuz Scientific Conferences, Metal Cutting Problems

Machined With a Mineral-Ceramic Instrument" was devoted to the methods of the most rational exploitation of cheap mineral-ceramic plates. The theme of Docent T.N. Loladze's report (Georgian Polytechnical Institute) was "The Nature of a Cutting Instrument's Wear". He told the conference about the experimental method of instantaneously fixing the cutting zone, developed by him. In the joint report of the Professors of the Tomskiy politekhnicheskiy institut (Tomsk Polytechnical Institute) A.M. Rozenberg and A.N. Yeremin on the strain by plastic deformation and hardness of the deformed body, the lecturers outlined the results of researches in the field of plastic deformations when cutting metals. The lecturers have succeeded in developing a method for solving a number of main problems on the mechanics of cutting by measuring the hardness of shavings. Great interest was aroused by the report of Professor A.V. Pankin (Moskovskiy avtomekhanicheskiy institut - Moscow Auto-Mechanical Institute) on the methods of fixing the most favorable cutting processes. A report dealing with the physics of friction and wear was delivered by Docent G.I. Yepi-

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

Intervuz Scientific Conferences, Metal Cutting Problems

fanov of the Moskovskiy vecherniy mashinostroitel'nyy institut (Moscow Machine Building Evening Institute). Problems of polishing were treated in the reports of Professors A.A. Matalin (Leningradskiy inzhenerno-ekonomicheskiy institut - Leningrad Engineering-Economic Institute) and Ye. N. Maslov (Moskovskiy inzhenerno-fizicheskiy institut - Moscow Engineering and Physical Institute). The conference valued the report of Docent A.N. Reznikov (Kuybyshevskiy industrial'nyy institut - Kuybyshev Industrial Institute) dedicated to the examination of the temperature field of the cutting zone. The important problem of processability of highly durable and heat-resisting materials was dealt with in Professor N.I. Reznikov's report (Kuybyshevskiy aviatsionnyy institut - Kuybyshev Aeronautical Institute). Many questions were put to Docent N.F. Kazakov of the Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy promyshlennosti (Moscow Technological Institute of the Meat and Dairy Industry), in connection with his report on the theory of wear and tear of cutting instruments. The information submitted by Docent B.D. Lazebnik (Institut mashino-

Card 4/5

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

Intervuz Scientific Conferences Metal Cutting Problems

vedeniya AS SSSR - Institute of Mechanical Engineering AS USSR) referred to the problems of learning the physical nature of wear of a hard-alloyed instrument by the method of radioactive isotopes. Among the scientists who also participated in the discussions were the Polish Professor Jan Kaczmarek (Krakow), P. Brennig and V. Vesely (Czechoslovakia), A. Richter, G. Weinhold and K. Agthe (German Democratic Republic), **Yen Pu-ch'iang** (China), and others.

ASSOCIATION: Tbilisskiy institut inzhenerov zheleznodorozhnogo transporta imeni V.I. Lenina (Tbilisi Institute of Railroad Engineers imeni V.I. Lenin).

Card 5/5

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

PHASE I BOOK EXPLOITATION SOV/4858

Avakov, Avak Arkad'yevich

Fizicheskiye osnovy teoriy stoykosti rezhushchikh instrumentov (Physical Bases of the Theory of Cutting-Tool Life) Moscow, Mashgiz, 1960. 307 p. Errata slip inserted. 5,000 copies printed.

Reviewer: M. I. Klushin, Candidate of Technical Sciences; Ed.: T. N. Loladze, Candidate of Mechanical Sciences; Editors of Publishing House: M. N. Morozova and P. A. Kunin; Tech. Ed. V. D. El'kind; Managing Ed. for Literature on Metal-working and Machine-Tool Making: V. I. Mitin, Engineer.

PURPOSE: This book is intended for readers who are well acquainted with the specialized literature on metal cutting.

COVERAGE: The book is based on a number of the author's earlier published works dealing with problems of the wear and life of cutting tools, and includes data on new experiments carried out by him. Special attention is given to a critical examination of theories on the life and wear of cutting tools and to methods of investigating the temperature fields in cutting. Attention is also

Card 1/6

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

given to the historical background of individual methods of analyzing the cutting process. Emphasis is given primarily to single-point cutting tools. The bibliography is considered by the author to be almost complete for this field, and includes works published as recently as 1960. No personalities are mentioned. There are 610 references, mostly Soviet.

TABLE OF CONTENTS:

Foreword 3

Ch. I. The Phenomenon of the Nonmonotonous Life and Productivity Variation of the Turning Tool [Caused] by the Change of Speed 5
1. Introduction 5
2. Experimental investigations of the dependence of the life and productivity of a turning tool on speed (1908-1958) 7
3. Critical examination of attempts to explain the reasons of nonmonotony in the variation of the life and productivity of turning tools with [change] of speed; some experimental data of the author 31

Ch. II. The Exponent m in the Life-Speed Relation: $v = \frac{c}{T^m}$ as Determined by Experimental Data [v -Speed; T- Life; C and m- Functions of Some Quantities of the Cutting Process] 47

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.A.

New cabinet for tools. Mashinostroitel' no.6:36 Je '62.
(MIRA 16:5)
(Factories—Equipment and supplies)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.A.; YURCHENKO, V.I., red.

[Nonresharpenable cutting tools] Neperetachivaemye reztsy. Rostov-na-Donu, Rostovskoe knizhnoe izd-vo, 1965. 52 p. (MIRA 18:10)

1. Zaveduyushchiy kafedroy fiziki Rostovskogo instituta inzhenerov zheleznodorozhnogo transporta (for Avakov).

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.A.; RYZHKIN, A.A.

Using the method of thermoelectric compensation in increasing the strength of drills. Stan. i instr. 36 no. 12:34-35 D '65 (MIRA 19:1)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

L 49447-65 EWP(k)/EWP(z)/EWT(d)/EWT(m)/EWP(h)/EWP(b)/EWA(d)/EWP(l)/EWP(v)/EWP(t)
ACCESSION NR: AP5010374 UR/0145/65/000/003/0071/0076

AUTHORS: Arzkov, A. A. (Candidate of technical sciences, Docent); Dubrov, Yu. S. (Aspirant); Nikolayeva, G. S. (Aspirant)

TITLE: Study of the resistance to wear of cutting tools

SOURCE: IVUZ. Mashinostroyeniye, no. 3, 1965, 71-76

TOPIC TAGS: lathe tool, cutting tool, thermoelectricity / 35 steel

ABSTRACT: Very high pressure in the point of contact between a cutting tool and the material on which it is used affects the tool material, which is normally cooled by cutting oil. One way to investigate the changes which occur in the edge of the tool is to run electric current of proper intensity through the tool and to measure the variations of this current. Another purpose of introducing weak current into the cutting zone is to compensate the generated thermoelectric current which decreases lifetime of the tool. Experiments were performed using a lathe with a 14-kw drive to work steel 35. Two lathe tools were employed, each connected to one pole of a battery. The basic principle of this method rests on the fact that thermoelectric currents can eliminate each other. It is not essential to measure the electric current or the temperature of the tool,

Card 1/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

L 49447-65
ACCESSION NR: AP5010374

the only purpose being to eliminate the formation of thermocouples and their side effects on the cutting tool. The wear of tools was also studied under a microscope. The performance of a lathe tool under standard conditions and with thermoelectric compensation is compared. Reference is made to "Meyers Electro-cooling Products" and, throughout the article, to Russian scientists and engineers who have used the method of cutting with two tools since 1945. Orig. art. has: 4 graphs and 2 figure.

ASSOCIATION: Rostovskiy-na-Donu institut inzhenerov zheleznodorozhnogo transporta (Rostov-on-the-Don Institute for Engineers of Railroad Transportation)

SUBMITTED: 28Oct64 ENCL: 00 SUB CODE: IE

NO REF SOV: 005 OTHER: 005

Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

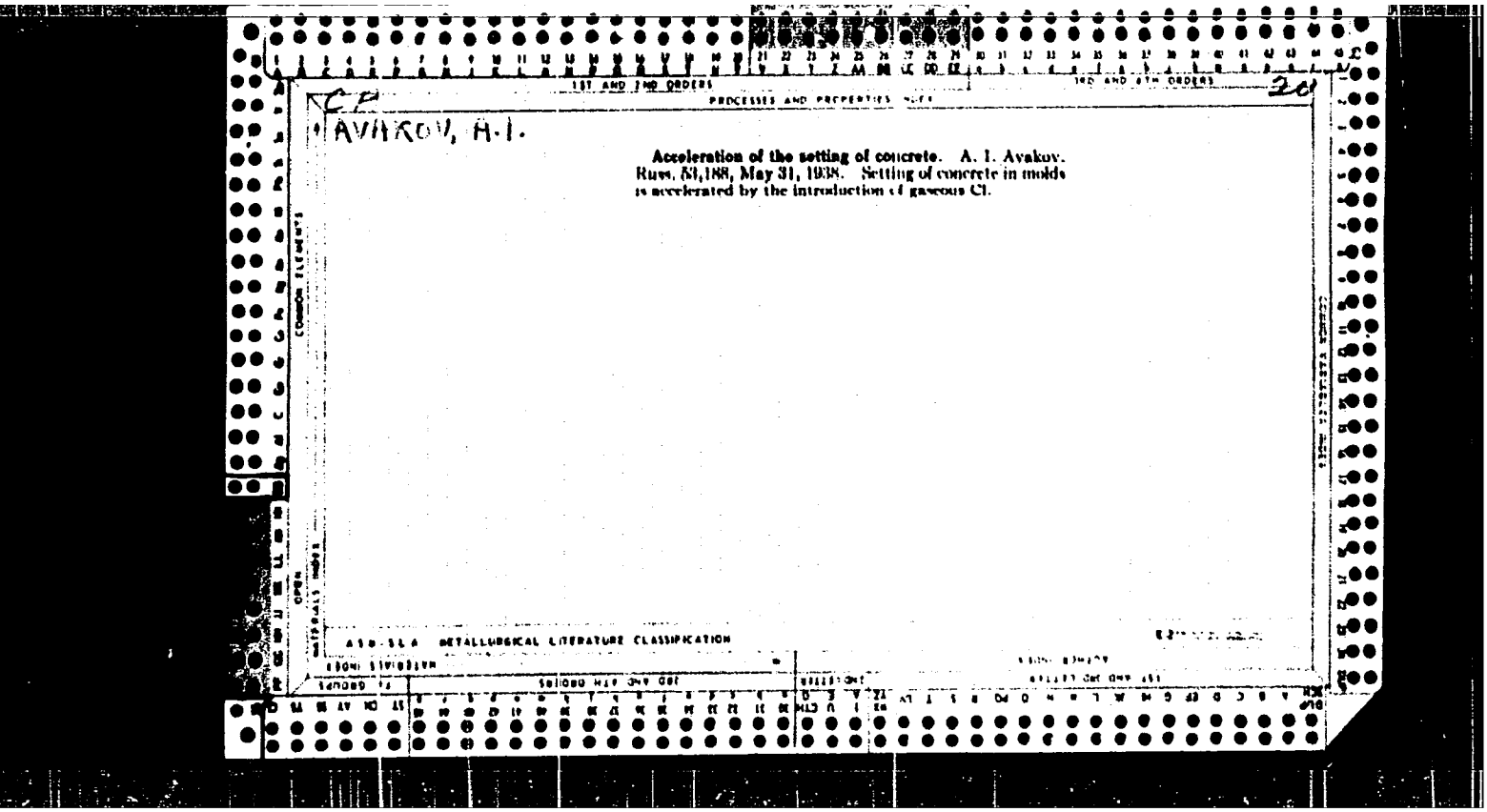
AVAKOV, A. G.

AVAKOV, A.G.; LYUBIMOV, I.B., spetsredaktor; KANEVSKAYA, M.D., redaktor; TIKHONOVA, Ye.A., tekhnicheskiy redaktor.

[According to hourly schedule; work practice of the "Lenkoran'" and "Stepan Razin" dredging units] Po chasovomu grafiku; opyt raboty zemkaravanov "Lenkoran'" i "Stepan Razin." Moskva, Gos. izd-vo vodnogo transporta, 1953. 42 p. (MLRA 7:8)
(Dredging)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

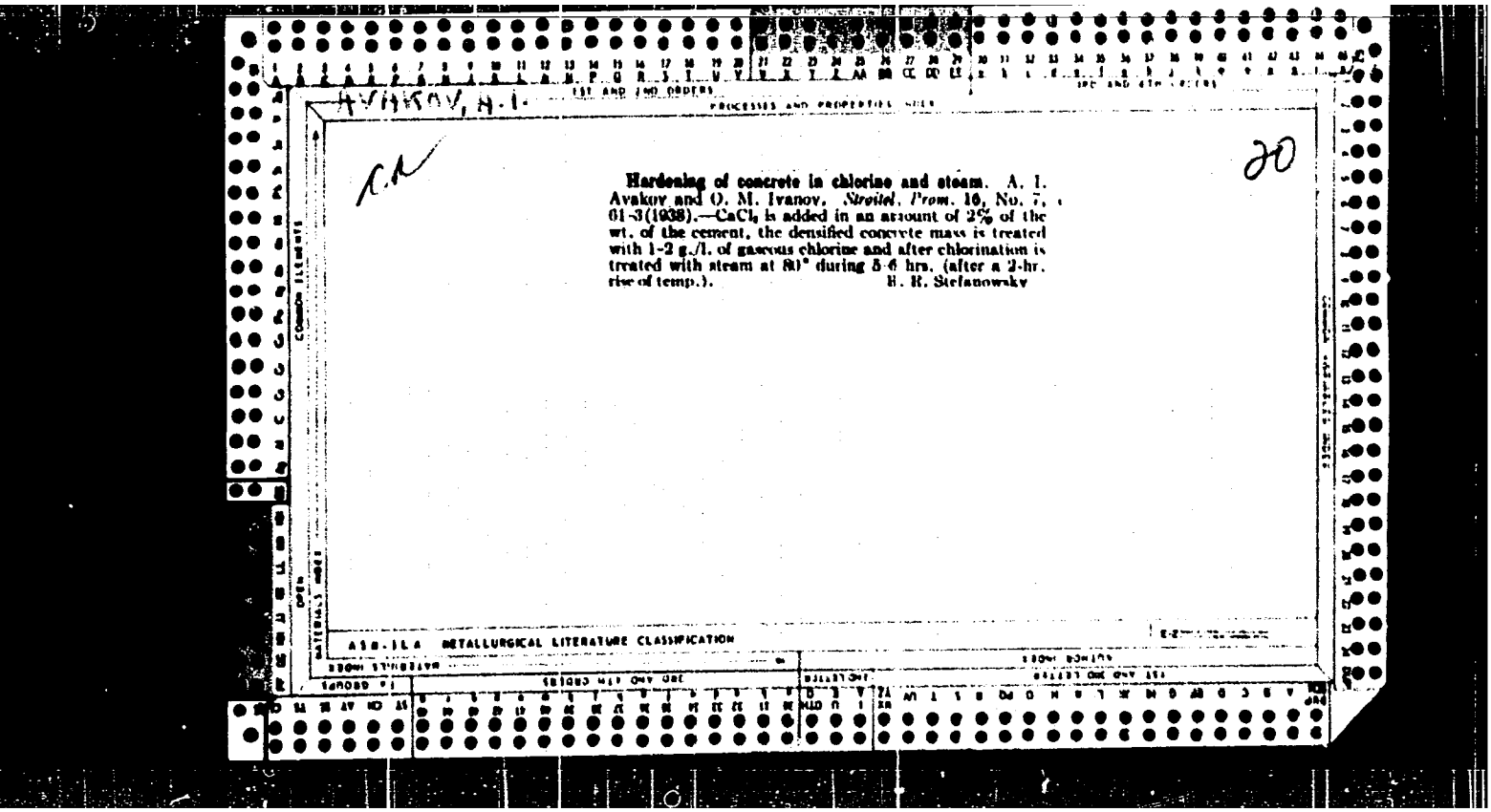


AVAKOV, A.I.

Acceleration of the setting of concrete. A. I. Avakov. Russ. 50,188, May 31, 1938. Setting of concrete in molds is accelerated by the introduction of gaseous Cl.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4



AVAKOV, A. I.

A.A

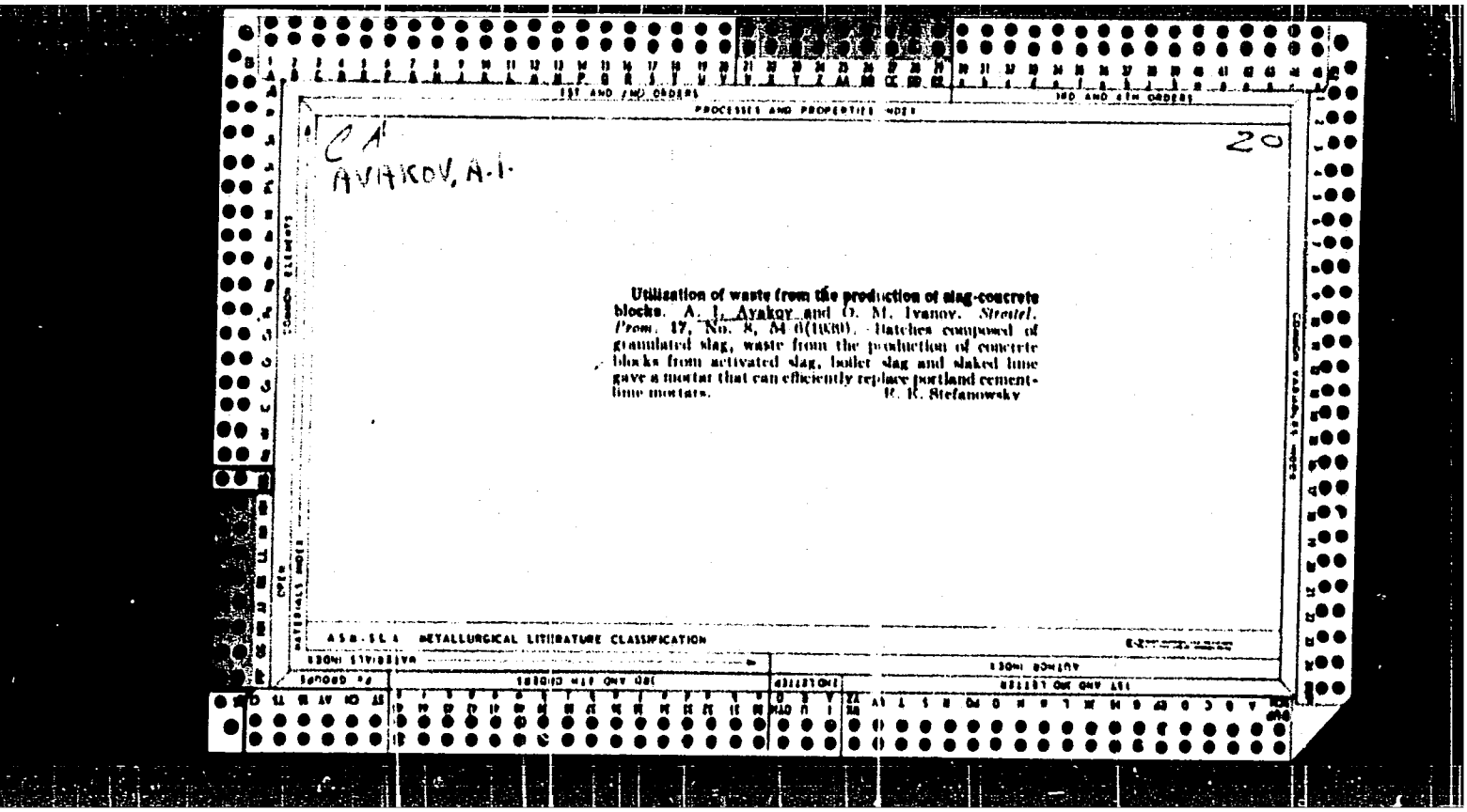
20

Hardening of concrete in chlorine and steam. A. I. Avakov and O. M. Ivanov. *Stroitel. Prom.* 16, No. 7, 61-3(1938).—$CaCl_2$ is added in an amount of 2% of the wt. of the cement, the densified concrete mass is treated with 1-2 g./l. of gaseous chlorine and after chlorination is treated with steam at 80° during 5-6 hrs. (after a 2-hr. rise of temp.). B. R. Stefanowsky

A58-11A METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4



CA
AVAKOV, A.I.

20

Utilization of waste from the production of slag-concrete blocks. A. I. Avakov and O. M. Ivanov. *Stroitel. Prom.* 17, No. 8, 54-6(1939). Batches composed of granulated slag, waste from the production of concrete blocks from activated slag, boiler slag and slaked lime gave a mortar that can efficiently replace portland cement-lime mortars. P. R. Stefanowsky

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

USSR/Engineering - Construction, Jan 52
Equipment

"Automatic Cold-Rolling Mill for Concrete Reinforcement Rods of Varied Cross Section," A. I. Avakov, Cand Tech Sci, N. Ye. Nosenko, Engr, NII (Sci Res Inst) of Constr, Minmashstroy (Ministry of Mach Bldg USSR)

"Byull Stroitel Tekh" No 1, pp 14-16

Describes mill designed by A. I. Avakov for cold rolling of round steel rods by squeezing them alternately in 2 mutually perpendicular directions. Mill is a mechanism of continuous action, and its essential parts are: device for

202T54

USSR/Engineering - Construction, Jan 52
Equipment (Contd)

removing scale and rust from rods, rolling unit, device for straightening rolled steel, shears for cutting rods and receiving unit with fixture for measuring length of rods to be cut.

202T54

AVAKOV, A. I.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A. I.

Cold drawn rods for reinforced concrete construction. Gor. khoz. Mosk., 26, no. 2, 1952

SO: MLRA, April 1952

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

1. AVAKOV, A. I.

2. USSR (600)

4. Concrete, Reinforced

7. Some problems of economizing metal in reinforced concrete. Za ekon. mat. no. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.I.

Producing large, prefabricated, reinforced concrete panel roofs. Stroitel'stva no.5:31-32 My '53. (MLRA 6:6)
(Roofs)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A. I.

PASTERNAK, P.L., professor, doktor tekhnicheskikh nauk; AVAKOV, A.I., kandidat tekhnicheskikh nauk; BERDICHEVSKIY, G.I., kandidat tekhnicheskikh nauk; MIKHAYLOV, K.V., kandidat tekhnicheskikh nauk; MEDVEDEV, L.Ya., tekhnicheskiy redaktor; TUMARKIN, D.M., inzhener, redaktor

[Prefabricated roofs made of prestressed composite girders and panels for industrial buildings] Sbornye pokrytiia promyshlennykh zdanii iz predvaritel'no napriazhennykh balok i panelei kompleksnoi konstruktsii. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1954. 63 p. (MLRA 7:8)

(Roofs) (Concrete, Prestressed)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.I., laureat Stalinskoy premii, kandidat tekhnicheskikh nauk; GAROVNIKOV, V.I., inzhener, nauchnyy redaktor; BERDICHEVSKIY, G.I., kandidat tekhnicheskikh nauk, redaktor; SMOL'YAKOVA, M.V., tekhnicheskiy redaktor

[Cold pressed broken surface bars for reinforced concrete construction] Kholodnospliushchennaia armatura periodicheskogo profilia dlia zhelezobetona. Izd. 2-e, perer. i dop. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1954. 166 p. (MLRA 7:10)
(Reinforced concrete)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

PASTERNAK,P.L., professor, doktor tekhnicheskikh nauk, rukovoditel'.
BERDICHEVSKIY,G.I., kandidat tekhnicheskikh nauk; AVAKOV,A.I., kandidat tekhnicheskikh nauk; MIKHAYLOV,K.V., kandidat tekhnicheskikh nauk

Prestressed reinforced concrete beams developed by the Scientific Research Institute of Construction. Rats. i izobr. predl. v stroi. no.81:23-25 '54. (MLRA 8:6)
(Girders) (Concrete, Prestressed)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, Artemiy Ivanovich; kandidat tekhnicheskikh nauk; HERDICHEVSKIY, G.I., kandidat tekhnicheskikh nauk, redaktor; SKRAMTAYEV, B.G., doktor tekhnicheskikh nauk, professor, redaktor; POPOV, N.A., doktor tekhnicheskikh nauk, professor, redaktor; ROSTOVTSEVA, M.P., redaktor; VOLKOV, V.S., tekhnicheskiy redaktor.

[Determining the composition of concrete mixtures and mortars; reference manual] Naznachenie sostavov i rastvorov; spravochnoe posobie. Pod obshchei red. B.G.Skramtaeva i N.A.Popova. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1955. 45 p. (Concrete) (Mortar)

(MLRA 9:6)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.I., laureat Stalinskoy premii, kandidat tekhnicheskikh nauk

Hardened rod steel for prestressed reinforced concrete beams. Bet. i zhel.-bet. no.2:64-67 My '55. (MLRA 8:9)
(Concrete, Prestressed) (Steel bars)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.I., laureat Stalinskoy premii, kandidat tekhnicheskikh nauk.

Prestressed reinforced concrete girders for industrial buildings. Sbor. mat. o nov. tekh. v stroi. 17 no.4:10-12 '55.
(Girders) (Concrete, Prestressed)
(MLRA 8:6)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.I., kandidat tekhnicheskikh nauk.

Strengthening steel reinforcements by extrusion. Bet.i zhel.-bet. no.6:220-222 Je '56. (MLRA 9:8)
(Reinforced concrete)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.I., kandidat tekhnicheskikh nauk; KOPCHUGOV, V.A., kandidat tekhnicheskikh nauk.

Twenty-four meter prestressed reinforced concrete beam. Nov.tekh. i pered.op.v stroi. 18 no.7:3-6 Jl '56. (MLRA 9:9)
(Girders) (Prestressed concrete)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A., doktor tekhnicheskikh nauk.

Strengthening steel reinforcements in producing reinforced concrete elements. Gor.i sel'.stroi. no.4:11-12 Ap '57. (MLRA 10:5)
(Reinforced concrete)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.I., doktor tekhnicheskikh nauk.

Diagrams for determining deflections of bent reinforced concrete elements. Bet. i zhel.-bet. no.4:148-150 Ap '57. (MLRA 10:6)
(Reinforced concrete)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.I.

SKRAMTAYEV, B.G., doktor tekhnicheskikh nauk, prof.; AVAKOV, A.I., doktor tekhn.nauk.

Second International Congress on precast reinforced concrete construction held in Dresden. Bet. i zhel. -bet. no.8:336-337 Ag '57. (MIRA 10:10)

1.Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Skramtayev)

(Dresden--Precast concrete construction--Congresses)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.I.; ANOPOV, G.A.

Machine for stressing reinforcing steel [Suggested by A.I. Avakov, G.A. Anopov]. Rats. i izobr. predl. v stroi. no.6:21-24 '58. (Prestressed concrete) (MIRA 11:10)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A.I.; RUSLER, A.E.

Instructions for planning and calculating the composition of heavy concrete. Trudy Un.druzh.nar. 6 Stroi. no.1827-33 '64.

(MIRA 18:10)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

(A) L 11117-66 EWT(m) GS

ACC NR: AT6001769 SOURCE CODE: UR/0000/65/000/000/0138/0144

AUTHOR: Ayakov, A. L.; Garyaynov, K. E.; Yakovlev, L. T.

ORG: None

TITLE: Thermal stresses in porous concretes during hydrothermal treatment

SOURCE: AN BSSR. Institut teplo- i massoobmena. Voprosy nestatsionarnogo peremosa tepla i massy (Problems of nonstationary heat and mass transfer). Minsk, Nauka i tekhnika, 1965, 138-144

TOPIC TAGS: thermal stress, concrete, porosity

ABSTRACT: In porous concretes (materials with a low heat conductivity), hydrothermal treatment causes significant temperature gradients which can lead to the appearance of destructive stresses. The present article describes an attempt to derive analytically calculating formular for determination of the temperatures and the thermal stresses associated with them, since those stresses can be decisive for determination of the desired rate of temperature change. In the general case, the temperature stresses at a moment of time, tau, can be expressed by the relationship:

$$\sigma(t, \tau) = f(t_\tau - t_0).$$

Card 1/3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

ACC NR: AT6001769

For an analytical expression of the temperature stresses in terms of the values of the temperature, the time, and the flow coordinate, it is required to find:

$$\sigma = f_1(t),\ t = \varphi(\tau, x),\ \frac{\partial q}{\partial \tau} \text{ and } \sigma = \psi(\tau, x).$$

The article considers an infinite slab with a thickness of 2R, and an initial temperature of the medium and the material, t_0; the average temperature, t_{av}, varies according to the equation $t_{av} = t_0 + b\tau$, and heat transfer obeys the convection law. The initial and boundary conditions are:

$$t(x, 0) = t_0,\ \frac{\partial t(0, \tau)}{\partial x} = 0,$$

$$-\frac{\partial t(R, \tau)}{\partial x} + H[(t_0 + b\tau) - t(R, \tau)] = 0.$$

It is required to determine t(x, tau), that is, to solve the equation

$$\frac{\partial t}{\partial \tau} = a\frac{\partial^2 t}{\partial x^2}.$$

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

L 12117-66

ACC NR: AT6001769

O

The article proceeds to a mathematical development which is said to result in absolute values of the temperature stresses. Thus, during the period of heating of porous concretes, the elastic modulus and the temperature stresses are smaller than during the cooling period. During the cooling period, after the end of the chemical processes in the concrete, the elastic modulus is considerably increased and the thermal stresses are greater than during the heating period. Orig. art. has: 7 formulas and 2 figures.

SUB CODE: 11, 13/ SUBM DATE: 02Sep65/ ORIG REF: 002/ OTH REF: 001

Card 3/3 gc

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, A. L.

Vozzhayeva, A. P., Avakov, A. L., and Yevsyukov, A. N. V. - "On the problem of Widal's analytic reaction", Trudy Astrakh. gos. med. in-ta, Vol. IX, 1948, p. 134-36.

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 8, 1949).

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

-AVAKOV, G.L., starshiy leytenant meditsinskoy sluzhby

Treating paronychia with intraosseus injections of antibiotics. Voen.-med.zhur. no.4:87 Ap '60. (MIRA 14:1)
(FELON (DISEASE)) (PENICILLIN)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, G.S.

Finds of hackberry (Celtis glabrata Stev.) and corn gromwell (Lithospermum arvense L.) in lower Quaternary lacustrine deposits of southern Georgia. Dokl. AN SSSR 135 no.2:443-444 N '60. (MIRA 13:11)

1. Predstavleno akademikom N.V.Sukachevym.
(Akhalkalaki Region--Hackberry, Fossil)
(Akhalkalaki Region--Corn gromwell, Fossil)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, G.S. (Tbilisi)

Hornwort in tertiary deposits. Priroda 51 no.2:118 F '62.
(MIRA 15:2)
(Paleobotany)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, G.S.

A new fossil species of hornwort from the Oligocene of the Zaysan Depression. Dokl.AN SSSR 145 no.1:185-186 Jl '62. (MIRA 15:7)

1. Institut paleobiologii AN Gruzinskoy SSR. Predstavleno akademikom V.N.Sukhachevym.
(Zaysan Lake region--Hornwort, Fossil)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, G.S.

Evolution of the genus Ceratophyllum. Trudy Inst. paleobiol. AN Gruz SSR 8:29-33 '63. (MIRA 17:7)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

24 (5)

AUTHOR: Avakov, G. V.

SOV/56-37-3-39/62

TITLE: Electron-Electron Scattering and Quantum Electrodynamics at Small Distances

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 3(9), pp 848 - 849 (USSR)

ABSTRACT: From the analysis of electron-electron scattering experiments the most direct information concerning electrons is obtained. From a comparison of theoretical formulas and the experimental data it is possible to determine the electric and the magnetic form factor of the electron. When investigating the electric form factor it is possible to calculate also the deviation from zero of the magnetic form factor of the electron. For this purpose the author investigates the vertex operator Γ_μ corresponding to the vertex in the Feynman scattering diagram: $\Gamma_\mu = a(q^2)\gamma_\mu + \gamma_\mu\gamma_\nu \frac{q_\nu}{\sqrt{-q^2}} b(q^2)$, where the invariant functions $a(q^2)$ and $b(q^2)$ of the square of the transferred four-dimensional momentum q^2, $(q^2 = q_o^2 - \vec{q}^2)$, correspond to the electric

Card 1/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

and magnetic form factor respectively. The author then explicitly writes down an expression for the scattering cross section (in the c.m.s. of the incident electron) $(d\sigma/\sigma_0 d\Omega$ in formula (2)). This rather long expression consists of ten summands, which in each case contain functions of p^2 and q^2, where $p^2 = -4\varepsilon^2\cos^2(\vartheta/2)$ and $q^2 = -4\varepsilon^2\sin^2(\vartheta/2)$, ε denoting the energy of the electron and ϑ the scattering angle. A system of p_i^2 is then written down, by means of which it is possible to obtain new equations for the solution of (2), without new variables occurring. The author thanks K. A. Ter-Martirosyan for suggesting the subject. There are 4 references, 2 of which are Soviet.

SUBMITTED: May 26, 1959

Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, R. A.

AVAKOV, R. A.--"Investigation of Systems of Direct Seeking of Stepped Automatic Telephone Stations." Min Communications USSR. Leningrad Electrical Engineering Inst of Communications imeni Professor M. A. Bonch-Bruyevich. Leningrad, 1955. (Dissertation for the Degree of Candidate in Technical Science).

SO Knizhnaya letopis'
No 2, 1956

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, R. A.

COMMUNICATION

"Method for Calculating Losses in Circuits of Step-by-Step Automatic Telephone Stations with Single Step Preselection," by R. A. Avakov, Elektrosvyaz', No 7, July 1957, pp 49-56.

A method is described by which to calculate the losses in single-step preselector step-by-step automatic telephone stations. The basic conditions for efficient construction of such circuits are considered. A graph is given for the number of group selector switches vs. the load for various availabilities of the preselector field.

Card 1/1

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, R.A.; PODVIDZ, M.M.

[Principles of designing an ARF-50-type automatic crossbar telephone station; training aid] Osnovy postroeniia avtomaticheskoi telefonnoi stantsii koordinatnoi sistemy tipa ARF-50; uchebnoe posobie. Leningrad, Leningr.elektrotekhn.in-t sviazi im. M.A.Bonch-Bruevicha, 1960. 84 p. (MIRA 13:11)

(Telephone, Automatic)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

S/194/61/000/012/096/097
D271/D301

AUTHOR: Avakov, R. A.

TITLE: Analysis of impulse circuits of the exchange type ATC (ATS)-54

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 12, 1961, 6, abstract 12L49 (Tr. nauchno-tekhn. konferentsii Leningr. elektrotekhn. in-ta svyazi, no. 1, L., 1961, 21-32)

TEXT: A brief description is given of the characteristic features of impulse circuits in a step-by-step automatic telephone exchange. A method is presented for determining the value and sign of impulse distortions, of the reliability coefficient of the operation and release of selector electromagnets in the following stages: First group selector, second - fourth group selectors and line selector. Operational diagrams are given for the dial contacts and elements of the impulse circuit of the first group selector, and of the dial contacts and elements of the impulse circuit of the

Card 1/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

Analysis of impulse ... S/194/61/000/012/096/097
D271/D301

group selector. A block-diagram and a method for measuring the distortion of impulses are given. 3 references. [Abstractor's note: Complete translation.]

Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, Nachik Mamikonovich,; LYUBIMOVA, V.V., doktor ekonomicheskikh nauk, otv. red.; BYKOV, I.K., red. izd-va,; YEGOROV, Yu. A., red. izd-va,; KUZ'MIN, I.F., tekhn. red.

[French monopolistic capital in North Africa] Frantsuzskii monopolisticheskii kapital v Severnoi Afrike. Moskva, Izd-vo Akad. nauk SSSR, 1958. 235 p. (MIRA 11:11)
(Africa, North--Economic conditions)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

GAVRILOV, Nikolay Ivanovich; AVAKOV, R.M., otv. red.; ZOTOVA, Yu.N., red. izd-va; TSVETKOVA, S.V., tekhn. red.

[West Africa under the French yoke, 1945-1959] Zapadnaia Afrika pod gnetom Frantsii; 1945-1959. Moskva, Izd-vo vostochnoi lit-ry, 1961. 208 p. (MIRA 14:10)
(Africa, French West--Economic conditions)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, S. A.

Oils and fats in foreign countries. Masl.-zhir.prom.23 no.1:44 '57. (MLRA 10:1)

(Oils and fats)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, S.A.

Distribution of the oil extraction industry. Masl.-zhir. prom. 23 no.10:10-13 '57. (MIRA 11:1)

1. Gosplan SSSR.

(Oil industries--History)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, S.A., inzh.

More attention to the construction of oil mills. Masl.-zhir. prom. 25 no.1:15-18 '59. (MIRA 12:1)
(Oil industries)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, S.A., inzh.

Automatic scales for vegetable oil. Masl.-zhir.prom. 26 no.3:36 Mr '60. (MIRA 13:6)

1. Gosudarstvennyy komitet Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu.
(Kiev--Scales (Weighing instruments)
(Oils and fats)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, S.A., inzh.; MORDVINTSEV, M.N., inzh.; PROZOROVSKIY, V.N., inzh.; SOSNOVSKIY, V.K., inzh.; YASTREBOV, N.A., inzh.

Experimental and model plants in the food industry. Mekh.i avtom.proizv. 16 no.4:2-6 Ap '62. (MIRA 15:4)
(Food industry)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, S.N.

Prevention and treatment of complications in aortal commissurotomy. Zhur. eksp. i klin. med. 3 no.4:25-34 '63 (MIRA 16:12)

1. Institut eksperimental'noy biologii i meditsiny Sibirskogo otdeleniya AN SSSR i Institut kardiologii i serdechnoy khirurgii AN Armyanskoy SSR.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

SOV/122-58-6-2/37

AUTHORS: ~~Avakov, V.A.~~ and Strakhov, V.V., Engineers

TITLE: The Design for Endurance of the Winch Shaft of a Bore-hole Hoist (Raschet pod"yemnogo vala burovoy lebedki na dolgovechnost')

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 6, pp 5 - 11 (USSR)

ABSTRACT: When the conditions of shaft loading are known, an endurance coefficient, less than unity, can be defined by which the maximum load acting for any length of time is multiplied to obtain the equivalent load for full-life endurance. The winch shaft is subject to loads varying in magnitude and position according to the programme of hoisting operations and the displacement of the winch cable along the drum. Endurance coefficients are analysed in the present paper for shaft fatigue and rolling bearing wear separately; the former on the basis of the cumulative damage concept; the latter on the basis of a load capacity formula in which the speed enters with its 3.3-rd root, the service life enters with the same power and the load enters proportionally. The load cycle of the borehole hoist is replaced by a power formula. The endurance coefficients are first computed without taking into account

Card1/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

SOV/122-58-6-2/37

The Design for Endurance of the Winch Shaft of a Bore-hole Hoist

the displacement of the cable along the drum and subsequently with this refinement. In an example with a maximum load of 16 tons, endurance coefficients of 0.8 in bending and 0.6 in torsion are obtained without cable displacement. With cable displacement, a factor of 0.83 is obtained by which the endurance coefficient in bending must be multiplied. There are 7 figures, 1 table and 3 Soviet references.

1. Hoists--Mathematical analysis 2. Shafts--Torque

Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AUTHORS: Avakov, V.A., Engineer and Strakhov, V.V., Engineer SOV/122-59-2-10/34

TITLE: Analysis of Shrink Fits (Raschet posadok s natyagom)

PERIODICAL: Vestnik Mashinostroyeniya, 1959, Nr 2, pp 33-34 (USSR)

ABSTRACT: Nomograms of the alignment chart type have been constructed to help in computing the specific pressure and transmissible torque between two components joined by a shrink fit. The charts cover hollow steel shafts and steel or cast iron sleeves. The shaft bore has been assumed to be one-tenth of the shaft diameter. The specific pressure is found after entering the shaft diameter, the sleeve diameter ratio and the interference of the fit. The torque computation also requires the sleeve length. There are 3 figures.

Card 1/1

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, V.A.

Calculation of equivalent stresses on the parts of a hoisting mechanism. Neft. khoz. 39 no.7:19-24 Jl '61. (MIRA 14:6)
(Hoisting machinery)
(Strains and stresses)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, V.A.; KEVORKOV, Yu.A.; SULTANOV, F.M.; SULTANOV, S.G.

Designing spur gearings with the correction coefficients $\xi_1=\xi_2$ 0, 6. Azerb. neft. khoz. 40 no.6:40-43 Je '61. (MIRA 14:8)
(Gearing, Spur)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

RAYKHEL', A.Ya.; ARKHANGEL'SKIY, V.L.; AVAKOV, V.A.

Effect of weight of the mobile elements of the hoisting mechanism on the medium lowering speed of the empty elevator. Neft. khoz. 40 no.11:22-25 N '62. (MIRA 16:7)

(Elevators)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, V.A.; KEVORKOV, Yu.A.; SULTANOV, F.M.; SULTANOV, S.G.

Overlapping of gear transmission with correction ratio $\xi_1 = \xi_2 = 0.6$.
Azerb. neft. khoz. 41 no.1:44 Ja '62. (MIRA 16:7)

(Gearing, Spur)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

GYANDZHUNTSEV, P.A., inzh.; AVAKOV, V.A., inzh.

Determining the safety factor for a plane stressed state. Vest.mashinostr. 43 no.11:20 N '63. (MIRA 17:2)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, V.A.; KALASHNIKOV, V.V.; RAYKHEL', A.Ya.

Selecting diesels for drilling rigs. Mash. i neft. obor. no.3:29-31 '64. (MIRA 17:5)

1. VNIIPTneftemash.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

RAYKHEL', A.Ya.; AVAKOV, V.A.; BAGRAMOV, R.A.

Method for evaluating the kinematic diagram of the main hoisting mechanism of drilling rigs. Mash. i neft. obor. no.8:7-11 '63. (MIRA 17:6)

1. VNIIPTneftemash i Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut neftyanogo mashinostroyeniya.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOV, V.A.; KEVORKOV, Yu.A.; SULTANOV, F.M.; SULTANOV, S.G.

Using corrected spur gearing in the petroleum industry. Azerb. neft. khoz. 40 no.5:39-41 My '61. (MIRA 16:12)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

Avakova, A.

137-1957-12-23656

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 117 (USSR)

AUTHOR: Avakova, A.

TITLE: The Strengthening of Reinforcement Steel for Reinforced Concrete (Uprochneniye armaturnoy stali dlya zhelezobetona)

PERIODICAL: Gor. i sel'sk. str-vo, 1957, Nr 4, pp 11-12

ABSTRACT: Description of a method of improving the mechanical properties of hot-rolled reinforcement steel by 8 - 11 percent through stretching. Special mills are used for this. The strengthening of hot-rolled steel of periodic section accomplished by this method reduces the quantities of metal required by 25 - 30 percent.

S. G.

1. Reinforcing steel-Strengthening

Card 1/1

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOVA, E.L., meditsinskaya sestra

Storing and sterilizing urological instruments. Zdrav. Turk. 8 no.1:44-45 Ja '64. (MIRA 17:5)

1. Urologicheskiy kabinet Turkmenskoy respublikanskoy bol'nitsy No.2 g. Chardzhou.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

GUSEYNOV, R.E.; GUSEYNOV, M.Dzh.; GASANALIZADE, A.G.; GUSEYNOV, K.I. MELIKOV, G.O.; AVAKOVA, L.M.

Data on chromosphere flares observed at the astronomical station of the Astrophysics Sector Academy of Sciences of the Azerbaijan S.S.R. during the International Geophysical Year and International Geophysical Co-operation in 1959. Izv. AN Azerb. SSR Ser. fiz.-mat. i tekh. nauk no.3:143-149 '60. (MIRA 13:11)

(Sun--Prominences)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

S/035/62/000/008/027/090
A001/A101

AUTHORS: Guseynov, R. E., Avakova, L. M., Guseynov, K. I.

TITLE: The chromospheric flare of October 29, 1960

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 8, 1962, 63, abstract 8A414 ("Solnechnyye dannyye", 1961, no. 5, 59 - 62)

TEXT: A characteristic feature of the flare observed at the Shemakha Observatory with a АФР-2 (AFR-2) telescope is the presence of several centers emerged in the region of a bright flocullus. The authors plotted the curves of brightness development and area of three main knots of the flare, as well as the brightest detail of the flocullus. Variations of brightness and knot area are noted to have a pulsation nature. The maximum brightness sets in after two comparatively low maxima. The rate of brightness increase is the highest near the first maximum. This characterizes also the variation of the knot area. Area maxima lag behind brightness maxima during the first extrema. Last maxima of brightness and area coincide in phase. Flare data are confronted with several unusual phenomena observed in the radio band.

E. Gurtovenko

[Abstracter's note: Complete translation]

Card 1/1

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOVA, L.S.; KUSTOVA, S.D.; TITOVA, N.B.

Composition of the hydrogen-containing fraction of low menthol peppermint oil. Trudy VNIISNDV no.6:125-127 '63. (MIRA 17:4)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOVA, L.S.; KUSTOVA, S.D.; RUDOL'FI, T.A.; SEVERTSEV, V.A.; TITOVA, N.B.; CHERKAYEV, V.G.; SHCHEDRINA, M.M.

Increasing the menthol content of low menthol peppermint oil. Trudy VNIISNDV no.6:164-166 '63. (MIRA 17:4)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKOVA, M.N.

Some features of manifestations of the sensitivity of representatives of the gram-positive and gram-negative groups of pathogenic bacteria to antibiotics produced by Actinomyces obtained from different types of Georgian soils. Zhur. mikrobiol. epid. i immun. 31 no. 5:119-120 My '60. (MIRA 13:10)

1. Iz Tbilisskogo instituta vaktsin i syvorotok.
(BACTERIA, EFFECT OF DRUGS ON) (ANTIBIOTICS)
(GEORGIA—ACTINOMYCES)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKUMOV, V.M.

Effect of the acceptor and donator of methyl groups on the content of luminal and prominal in the blood. Farm. i toks. 28 no.1:57-59 Ja-F '65. (MIRA 18:12)

1. Laboratoriya farmakologii nervnoy sistemy (zav. - deystvitel'nyy chlen AMN SSSR prof. V.V.Zakusov) Instituta farmakologii i khimioterapii AMN SSSR, Moskva. Submitted November 23, 1963.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKUMOVA, Ye. A.

Clinical significance of the correlation between carbonic anhydrase of the blood and acidity of stomach juices. V. G. Mkhitaryan, Ye. A. Avakumova, and S. G. Shahnazaryan (Med. Inst., Erevan). *Izvest. Akad. Nauk Armyan. S.S.R., Biol. i Sel'skokhoz. Nauki* 8, No. 7, 51-7(1955)(in Russian; Armenian summary 57-8).—At normal activity of carbonic anhydrase and anhydrase index of blood, the quantity of HCl in the stomach is within normal limits. With gastritis and a reduced acidity the activity is lowered. With an increase in acidity of the stomach juices there is a rise in the activity of the carbonic anhydrase of the blood. At a lower acidity there is a more marked activity of the juices than under a higher acidity. The anhydrase index may supplement other lab. tests in determining the functioning of the stomach lining in relation to the production of HCl. The study covers clinical cases of 84 patients and 10 healthy people.
J. S. Joffe

(2)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKUMOVIC, M.

Flotation chemicals. p. 29

HEMPRO-BILTEN, Beograd, Vol 6, No. 1/2, 1956

SO: East European Accessions List, Vol 6, No. 10, Oct., 1956

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKUMOVIC, M.

The struggle of the English chemical industry against inflation. p. 52.
(Hempro-Hilten, Vol. 6, no. 13/14, 1956, Yugoslavia.)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

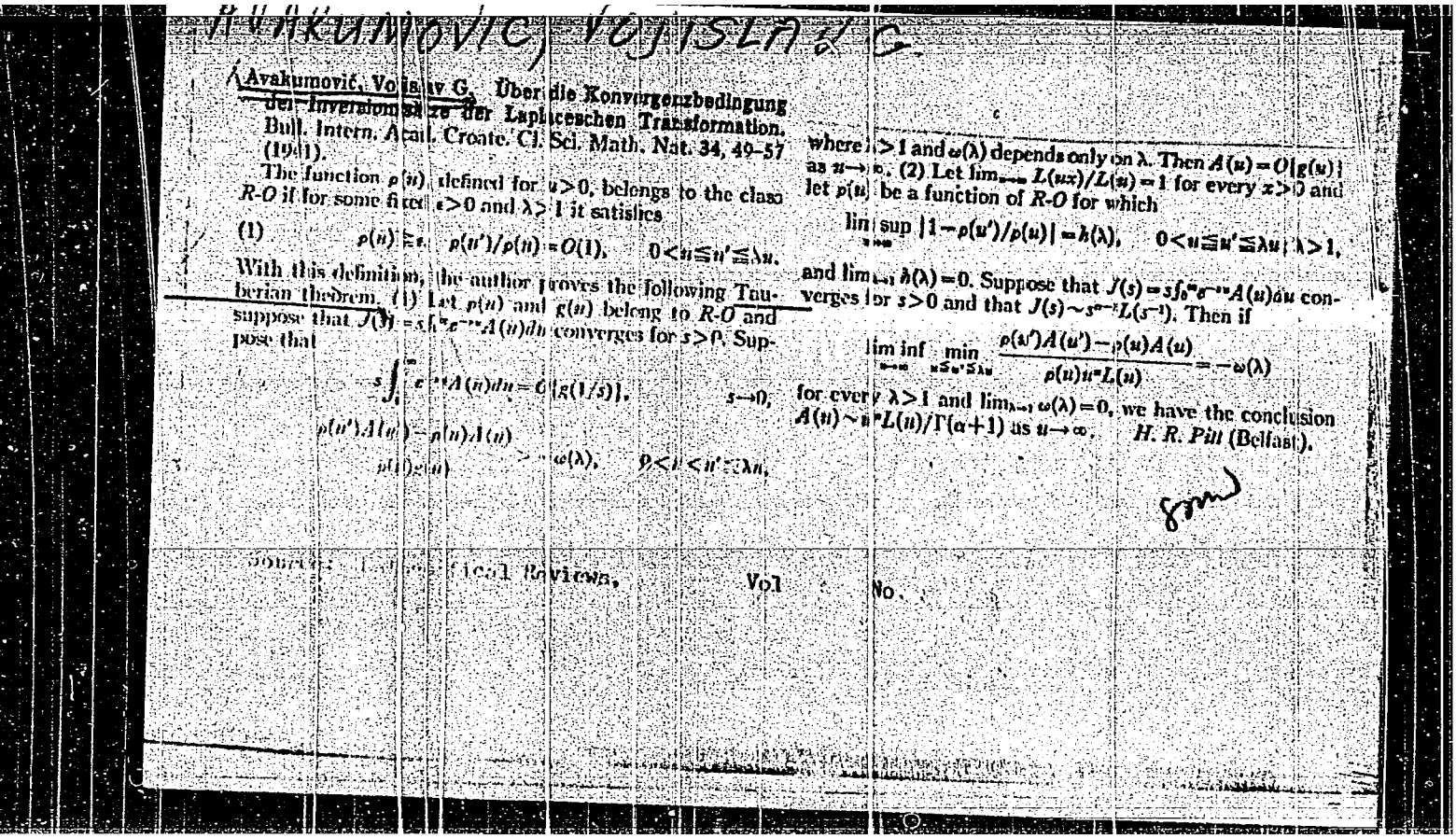
AVRAMOVIC, M.

Flotation chemicals and their importance in mining. p. 248.
(Radioamater, Vol. 8, No. 6, 1956, Beograd, Yugoslavia)

SO: Monthly List of East European Accessions (EEAL) Lc. Vol. 6, No. 8, Aug 1957. Uncl.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4



AVAKUMOVIC, VOJISLAV G.

Avakumović, Vojislav G. Über die Konvergenzbedingung der Inversionsformeln der Laplaceschen Transformation. Bull. Intern. Acad. Croate. Cl. Sci. Math. Nat. 34, 49–57 (1941).

The function $\rho(u)$ defined for $u>0$, belongs to the class R-O if for some fixed $\epsilon>0$ and $\lambda>1$ it satisfies

(1) $\rho(u)\geq\epsilon$, $\rho(u')/\rho(u)=O(1)$, $0<u\leqq u'\leqq\lambda u$.

With this definition, the author proves the following Tauberian theorem. (1) Let $\rho(u)$ and $g(u)$ belong to R-O and suppose that $J(s)=s\int_0^\infty e^{-su}A(u)du$ converges for $s>0$. Suppose that

$$s\int_0^\infty e^{-su}A(u)du=O\{g(1/s)\},\qquad s\to 0;$$

$$\rho(u')A(u')-\rho(u)A(u)>-\omega(\lambda),\qquad 0<u<u'\leqq\lambda u,$$

where $\lambda>1$ and $\omega(\lambda)$ depends only on λ. Then $A(u)=O\{g(u)\}$ as $u\to\infty$. (2) Let $\lim_{u\to\infty}L(ux)/L(u)=1$ for every $x>0$ and let $\rho(u)$ be a function of R-O for which

$$\limsup_{u\to\infty}|1-\rho(u')/\rho(u)|=h(\lambda),\qquad 0<u\leqq u'\leqq\lambda u;\ \lambda>1,$$

and $\lim_{\lambda\to 1}h(\lambda)=0$. Suppose that $J(s)=s\int_0^\infty e^{-su}A(u)du$ converges for $s>0$ and that $J(s)\sim s^{-\alpha}L(s^{-1})$. Then if

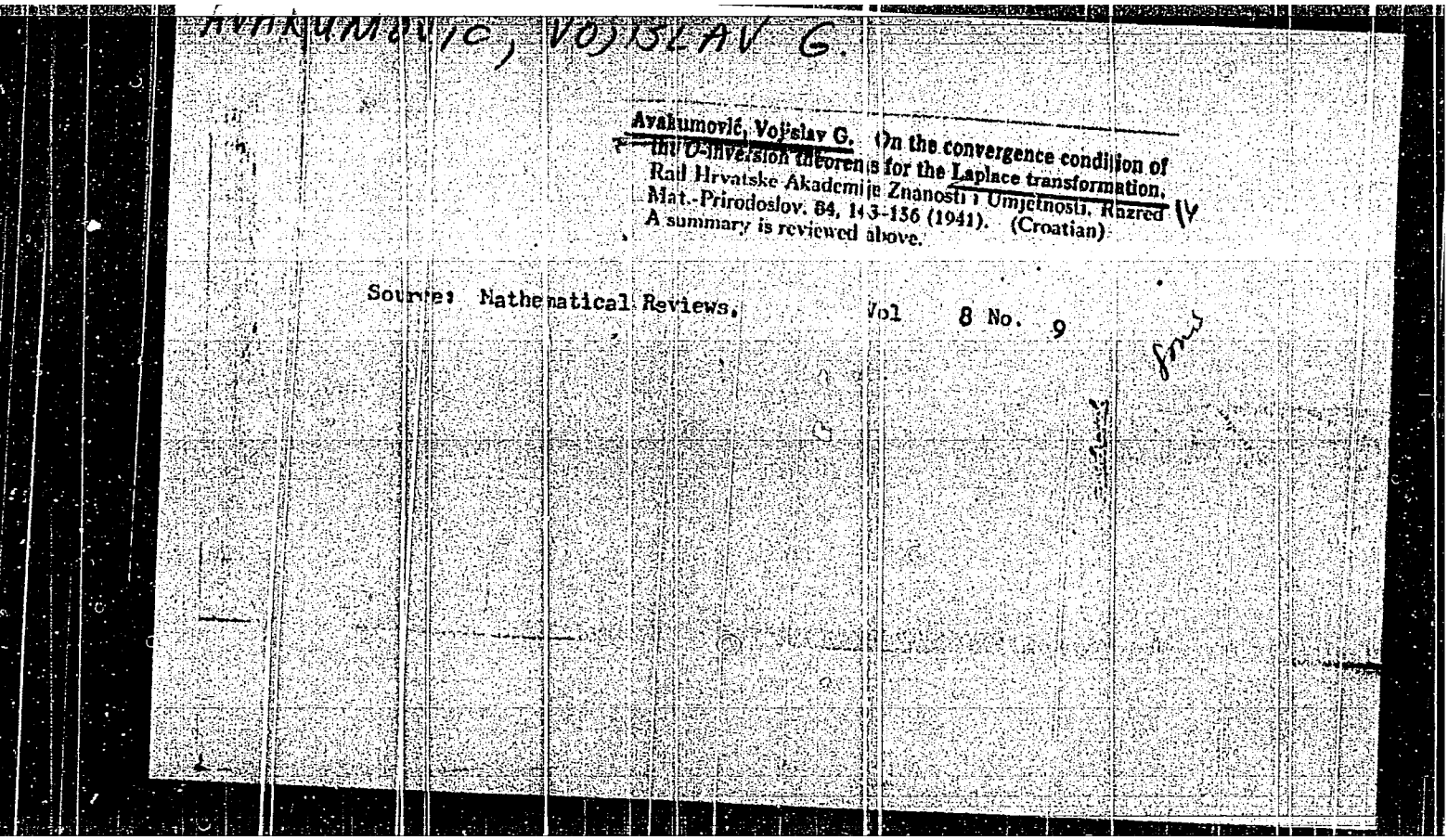
$$\liminf_{u\to\infty}\min_{u\leqq u'\leqq\lambda u}\frac{\rho(u')A(u')-\rho(u)A(u)}{\rho(u)u^{\alpha}L(u)}=-\omega(\lambda)$$

for every $\lambda>1$ and $\lim_{\lambda\to 1}\omega(\lambda)=0$, we have the conclusion $A(u)\sim u^{\alpha}L(u)/\Gamma(\alpha+1)$ as $u\to\infty$. *H. R. Pitt* (Belfast).

Mathematical Reviews, Vol. , No.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4



AVAKUMOVIĆ, VOJISLAV G.

Avakumović, Vojislav G. On the convergence condition of the U-inversion theorems for the Laplace transformation. Rad Hrvatske Akademije Znanosti i Umjetnosti. Razred IV Mat.-Prirodoslov. 84, 143-156 (1941). (Croatian)
A summary is reviewed above.

Source: Mathematical Reviews, Vol 8 No. 9

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

ÁVAKUMOVIĆ, VOJISLAV G.

Avakumović, Vojislav G. Sur l'équation différentielle de Thomas-Fermi. Publ. Inst. Math. Nat. Serbe Sci. 1, 101–113 (1947).

The author considers the asymptotic behavior, for large x, of $o(1)$-solutions of $y''=f(x)y^\lambda$, in case $\lambda>1$ and $f(x)$ is a positive continuous function. The main result is that if $y(x)=o(1)$, $f(x)\sim x^\nu L(x)$, where $\nu>-2$, $L(tx)/L(x)\sim 1$ for every fixed $t>0$ and $L(x)=o(x^\varepsilon)$ for $\varepsilon>0$, then $y(x)\sim p(x)$, where $x^{\nu+2}L(x)p^{\lambda-1}(x)\sim(1+\lambda+\nu)(2+\nu)$. The proof proceeds by considering a suitable function $p(x)$, satisfying the last relation and $p''\sim f(x)p^\lambda(x)$, and applying a "variation of constants" $y(x)=p(x)z(\varphi(x))$, where φ is a solution of $p\varphi''+2p'\varphi'+\alpha p\varphi^{\lambda}=0$, $\alpha>0$. The resulting differential equation for z is of the form $z''-\alpha z=\chi(x)z(\Omega(x)z^{\lambda-1}-1)$, where $\chi(x)\geqq\beta>0$ and $\Omega(x)\sim 1$. Tauberian considerations show that $z(\varphi(x))\sim 1$. Other theorems furnish estimates, instead of asymptotic formulae, for $y(x)$ under less restrictive assumptions on $f(x)$. *P. Hartman* (Baltimore, Md.).

Source: Mathematical Reviews, Vol 10 No. 7

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

Avakumović, Vojislav G. Contribution à la théorie des intégrales de Laplace. Acad. Serbe Sci. Publ. Inst. Math. 2 (1948), 91–107. (French. Serbian summary)

[The paper is dated 1941.] The author continues his researches on the integral

$$I(s) = s\int_0^\infty e^{-su}A(u)\,du \qquad (\sigma = \Re s > 0),$$

on the general hypothesis that $I(s)$ is bounded in a convex domain D_k having contact of order $k-1$ $(1<k<\infty)$ with the imaginary axis at $s=0$ [cf. Math. Z. 46, 650–664 (1940); 47, 141–152 (1940); these Rev. 2, 191; 3, 232]. He writes (with a fixed $\lambda>0$) $Q(t) = \lim_{\sigma\to+0} I(\sigma+|t|^k+\lambda t)$, $H(y) = \pi^{-1}\int_{-\infty}^{\infty} t^{-1}\sin yt\,Q(t)\,dt$ (so that $H(y)$ is the Dirichlet integral of the boundary values of $I(s)$ for a certain D_k), and aims at obtaining inferences from $H(y)$ to $A(u)$ subject to the Tauberian condition

$$\text{(K-o)}\quad \liminf_{u\to\infty}\ \min_{u\le u'\le \lambda u} u^\beta[A(u')-A(u)] = -\omega(\sigma)\to 0 \qquad (\sigma\to+0),$$

where $U(u) = u+u^{1/k}$, $0\le\beta<(k-1)/k$. The principal result in this direction (a refinement of an earlier one) is that $H(y) = Q(0)+o(y^{-\beta})\Rightarrow A(u) = Q(0)+o(u^{-\beta})$ $(y, u\to\infty)$, whenever (K-o) is satisfied. The main part of the paper is devoted to an intermediate class of theorem in which (K-o) is not assumed and the conclusions relate to certain weighted averages of $A(u)$ (with "peaked" weighting functions of rather elaborate structure). The passage to $A(u)$ itself, subject to (K-o), is indicated without full details; it is stated that the steps omitted follow familiar Tauberian lines.

A. E. Ingham (Cambridge, England).

Source: Mathematical Reviews, Vol 10 No. 7

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKUMOVIC, VOJISLAV G.

1000

Avakumović, Vojislav G. Sur l'équation différentielle de [redacted]. Acad. Serbe Sci. Publ. Inst. Math. 2, 203-235 (1948). (French. Serbian summary)

This paper is a continuation of the one reviewed above and deals with the differential equation for s, mentioned near the end of the preceding review. It is shown that, under suitable conditions, the asymptotic formula $s(\varphi(x))\sim 1$ above can be refined to one of the form

$$s=1-\sum_{j=1}^{n-1} A_j e^{j\alpha\varphi(x)}+O(\exp n\alpha\varphi(x)).$$

This result is applied to obtain refined asymptotic formulae for $o(1)$-solutions of $y''=f(x)y^\lambda$. For example, an $o(1)$-solution of the Thomas-Fermi equation $y''=x^{-\frac{1}{2}}y^{\frac{3}{2}}$ satisfies $y(x)x^3/144=1-\sum_1^{n-1}A_jc^jx^{-jr}+O(x^{-nr})$, where $r=\frac{1}{2}(7-\sqrt{73})$; $A_1, A_2, \cdots$ are absolute constants, c an integration constant, and n an arbitrarily fixed positive integer.

P. Hartman (Baltimore, Md.).

Source: Mathematical Reviews, Vol 10 No. 7

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKUMOVIC, V.G.

2000

Avakumović, Vojislav G. Sur le problème aux limites des équations différentielles du second ordre non linéaires. Glas Srpske Akad. Nauka 191, 53–66 (1948). (Serbian. French summary)

The author improves a result of A. Rosenblatt [Bull. Soc. Math. Grèce 14, no. 1, 7–15 (1933)] concerning the boundary problem $y''=f(x, y, y')$, $y(a)=A$, $y(b)=B$. Making a linear transformation of the independent and dependent variables we can take $a=0$, $b=1$, $A=B=0$ and the author's result then is the following. A solution of $y''=f(x, y, y')$, $y(0)=0$, $y(1)=0$, exists if:

$$(1)\quad |f(x, y_1, y_1')-f(x, y_2, y_2')| \leq \frac{\alpha|y_1-y_2|}{x^2(1-x)^2}+\frac{\beta|y_1'-y_2'|}{x(1-x)},$$

where $\alpha+\beta<\frac{1}{2}$; and (2) there exists an integrable function $F(x)$ over $(0, 1)$ such that $|f(x, y, y')|<F(x)$ for $|y|<\Phi(x)$ and $|y'|<\Phi^*(x)$, where

$$\Phi(x)=(1-x)\int_0^x sF(s)ds+x\int_x^1(1-s)F(s)ds,$$

$$\Phi^*(x)=\int_0^x sF(s)dx+\int_x^1(1-s)F(s)dx.$$

A result on the minimum spacing of successive zeros is also given.

N. Levinson (Cambridge, Mass.).

Source: Mathematical Reviews, Vol 11 No. 4

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKUMOVIC, V. G.

Avakumović, Vojislav G. Sur l'équation différentielle de Thomas-Fermi. Théorèmes relatifs à l'existence des intégrales. Glas Srpske Akad. Nauka 191, 153-187 (1948). (Serbian. French summary)

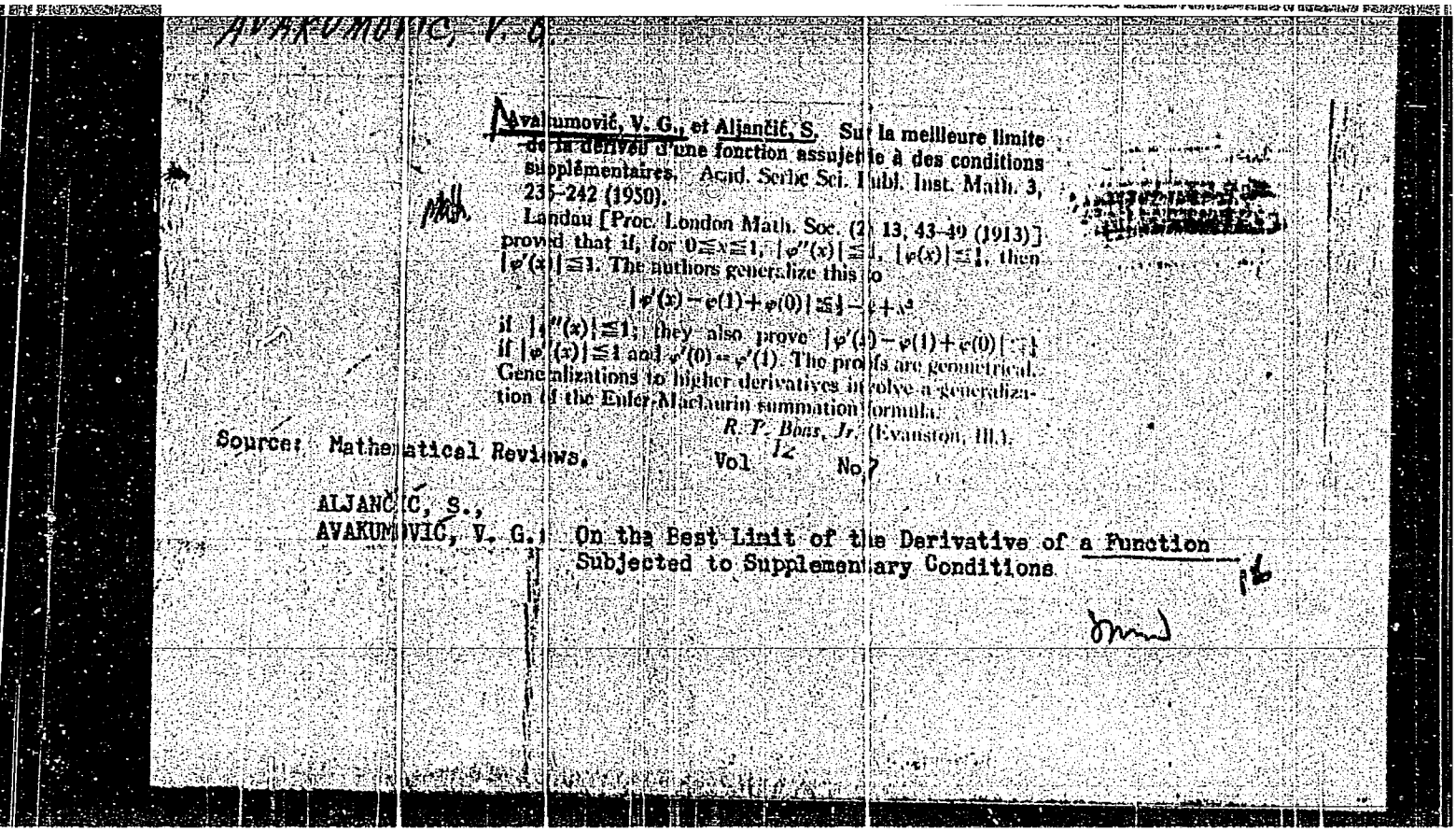
The author obtains sufficient conditions on $F(x, y)$ for the existence of a solution $y(x)$ of $y'' = F(x, y)$ where $y(0) = 1$, $y(x) \to 0$ as $x \to \infty$. For the case $F(x, y) = f(x)y^\lambda$, $\lambda > 0$, his sufficient conditions are $f(x)$ continuous and $f(x) > 0$ for $x > 0$, $x^\alpha f(x) < \infty$ for small $x > 0$ and $x^\alpha f(x) > c > 0$ for large x for some $\alpha < 2$. In this case the solution is unique.

N. Levinson (Cambridge, Mass.).

Source: Mathematical Reviews Vol 11 No. 3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4



AVAKUMOVIC, V. G.

Avakumović, V. G., et Aljančić, S. Sur la meilleure limite de la dérivée d'une fonction assujettie à des conditions supplémentaires. Acad. Serbe Sci. Publ. Inst. Math. 3, 235–242 (1950).

Landau [Proc. London Math. Soc. (2) 13, 43–49 (1913)] proved that if, for $0 \leq x \leq 1$, $|\varphi''(x)| \leq 1$, $|\varphi(x)| \leq 1$, then $|\varphi'(x)| \leq 3$. The authors generalize this to

$$|\varphi'(x) - \varphi(1) + \varphi(0)| \leq \tfrac{1}{2} - x + x^2$$

if $|\varphi''(x)| \leq 1$; they also prove $|\varphi'(x) - \varphi(1) + \varphi(0)| \leq \tfrac{1}{4}$ if $|\varphi'(x)| \leq 1$ and $\varphi'(0) = \varphi'(1)$. The proofs are geometrical. Generalizations to higher derivatives involve a generalization of the Euler-Maclaurin summation formula.

R. P. Boas, Jr. (Evanston, Ill.).

Source: Mathematical Reviews, Vol. 12 No. 7

ALJANČIĆ, S.,
AVAKUMOVIĆ, V. G.: On the Best Limit of the Derivative of a Function Subjected to Supplementary Conditions.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

Avakumović, Vojislav G.

Avakumović, Vojislav G. Einige Sätze über Landausche Integrale. Acad. Serbe Sci. Publ. Inst. Math. 3, 287–304 (1950).

Let $L(t)=\int_0^t e^{\tau}dA(u)$, where $A(u)$ is of bounded variation on every finite interval. Continuing a previous paper [Math. Z. 53, 52–58 (1950); these Rev. 12, 254], the author imposes the condition $L(t)=O(\exp(t^{\theta}))$, $t\to\infty$, $0<\theta\leqq 1$ (in the previous paper $\theta=1$), and proves the following theorems. (1) Under the Tauberian condition

$$u^{\theta/(\theta+1)}\{A(v)-A(u)\}>-m \quad \text{for} \quad u\leqq v\leqq u+u^{\theta/(\theta+1)}$$

it follows that $u^{\theta/(\theta+1)}A(u)=O(1)$ as $u\to 0$. (2) If

$$\liminf u^{\theta/(\theta+1)}\{A(v)-A(u)\}=0 \text{ for } u\leqq v\leqq u+u^{\theta/(\theta+1)},\ u\to\infty,$$

then $u^{\theta/(\theta+1)}A(u)\to 0$. (3) [For every $\delta>0$ let

$$A(u)>-M(\delta)\exp\{\delta u^{\theta/(\theta+1)}\}.]$$

Then $\limsup u^{-\theta/(\theta+1)}\log|A(u)|\leqq 0$. [The sentence in square brackets was omitted in the paper in Satz 3 and in Satz A and in the third line of p. 289 the argument of the function A should be $u^{\theta/(\theta+1)}$; corrections supplied by the author.] The method of proof is similar to that of the previous paper. The greater part of the paper is devoted to proving the lemma that if, for $k\geqq 2$, $a>0$, $\epsilon>0$, we define

$$\chi(z)=(2\pi i)^{-1}\int_{-i\infty}^{+i\infty} z^{v}\{\Gamma(v)/\Gamma(v/k)\}dv,$$

then $\chi(z)$ is entire and

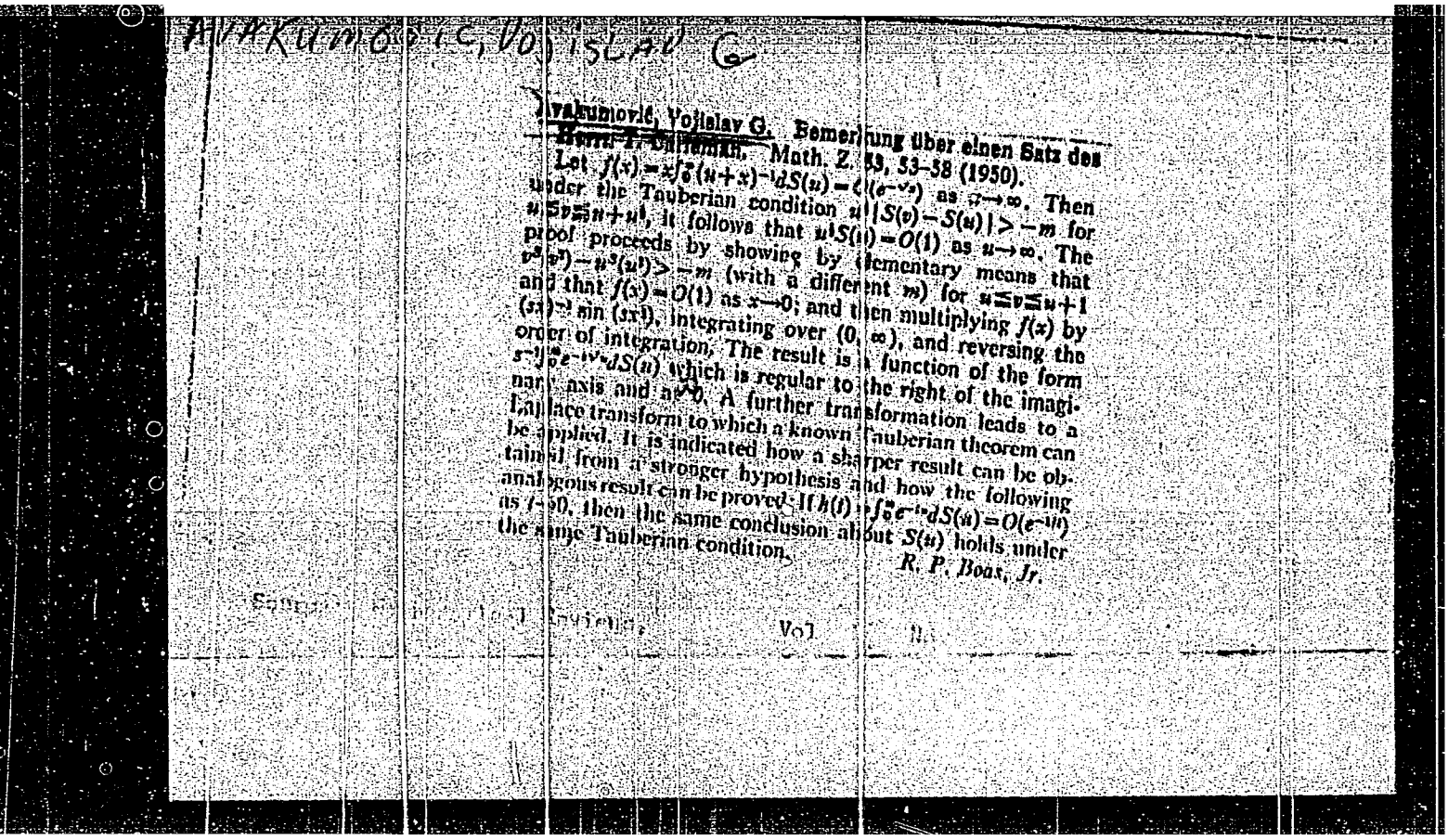
$$|z^{a(k-1)}\exp\{(k-1)(z/k)^{a(k-1)}\}\chi(z)|<C(k).$$

R. P. Boas, Jr. (Evanston, Ill.).

Source: Mathematical Reviews, Vol 12 No. 7

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4



AVAKUMOVIĆ, V; ISLAM, G

Avakumović, Vojislav G. Bemerkung über einen Satz des Herrn T. Ehrenfeucht. Math. Z. 53, 53–58 (1950).

Let $f(x)=x\int_0^\infty (u+x)^{-1}dS(u)=o(e^{-\nu x})$ as $x\to\infty$. Then under the Tauberian condition $u|S(v)-S(u)|>-m$ for $u\le v\le u+1$, it follows that $u^1S(u)=O(1)$ as $u\to\infty$. The proof proceeds by showing by elementary means that $v^2\Delta^2(u^1)-u^2(u^1)>-m$ (with a different m) for $u\le v\le u+1$ and that $f(x)=O(1)$ as $x\to 0$; and then multiplying $f(x)$ by $(sx)^{-1}\sin(sx)$, integrating over $(0,\infty)$, and reversing the order of integration. The result is a function of the form $s^{-1}\int_0^\infty e^{-\nu s}dS(u)$ which is regular to the right of the imaginary axis and at $s=0$. A further transformation leads to a Laplace transform to which a known Tauberian theorem can be applied. It is indicated how a sharper result can be obtained from a stronger hypothesis and how the following analogous result can be proved: If $h(t)\to 0$ as $t\to 0$, then the same conclusion about $S(u)$ holds under the same Tauberian condition.

R. P. Boas, Jr.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

Avakumović, V. G.

Nonlinear diff. eqns. 7c

Avakumović, V. G. Über die Nullstellen der Integrale nichtlinearer Differentialgleichungen zweiter Ordnung. Srpska Akad. Nauka. Zbornik Radova, Knj. 7. Matematički Institut, Knj. 1, 1-16 (1951). (Serbo-Croatian. German summary)

Assume that in the region D:

$$a \leqq x \leqq b, \quad |y| \leqq \tfrac{1}{2}M(x-a)(b-x)$$

the function $f(x)$ is continuous and satisfies $|f(x, y)| \leqq M$, $|f(x, y_1) - f(x, y_2)| \leqq a|y_1 - y_2|$ with $(b-a)^2 < \pi^2$. Then the boundary value problem $y'' = f(x, y)$, $y(a) = y(b) = 0$, has exactly one solution in D and it can be found by successive approximations. This is a slight improvement over a result by Picard [Leçons sur quelques problèmes aux limites de la théorie des équations différentielles, Gauthier-Villars, Paris, 1930] inasmuch as the constant 8 is replaced by π^2 in the last condition, this being the best possible constant. It follows that if $f(x, 0) \equiv 0$ and a, b are two consecutive zeros of $y'' = f(x, y)$ then $b - a \geqq \pi/a$.

M. Golomb.

Source: Mathematical Reviews, Vol 13 No. 3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4

AVAKUMOVIC, V.G.

"The Problem of the Limits of Quadratic, Differential, but Nonlinear Equations, p. 157. (BULLETIN. SCIENCES MATEMATIQUES. Vol 5, No. 1, 1952 Beograd, Yugoslavia)

SO: Monthly Lists of East European Accessions, L.C., Vol. 2, Nov. 1953 No. 11, Uncl.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102520007-4"